CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/CEMENT/2015-16 Date: 23.04.2015

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
***NAME OF THE WORK**	:	Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
***REFERENCE**	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	20.04.2015
DATE OF TESTING	:	20.04.2015 to 23.04.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	31.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	490 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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VISHWANATH .C
Quality Manager

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/SAND-Gradation/2015-16 : 23.04.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivananda,**
No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.

*** Name of Work** : Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 20.04.2015

Date of Testing : 23.04.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	95.15	90-100	90-100	90-100	95-100
2.36	79.15	60-95	75-100	85-100	95-100
1.18	50.65	30-70	55-90	75-100	90-100
600 Micron	21.65	15-34	35-59	60-79	80-100
300 Micron	10.15	5-20	8-30	12-40	15-50
150 Micron	4.15	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/AGG/GR/2015-16 : 23.04.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivananda,**
No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.

*** Name of Work** : Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 20.04.2015

Date of Testing : 23.04.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	98.00	95-100	85-100
20	53.00	30-70	0-20
10	25.00	10-35	0-5
4.75	1.00	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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46

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/CC Solid Block/2015-16 : 25.04.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
* Name of the Work	: Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Sample Received on	: 20.04.2015
Date of Testing	: 25.04.2015
Size of Blocks	: 400mm x 200mm x 200mm
Cross Sectional Area	: 80000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	34.66	256.9	3.21	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.26	257.8	3.22	
3	Block 3	34.58	258.6	3.23	
4	Block 4	36.96	259.6	3.25	
5	Block 5	34.99	260.3	3.25	
6	Block 6	35.22	261.2	3.27	
7	Block 7	36.98	262.3	3.28	
8	Block 8	35.65	263.5	3.29	

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/W.No.15/NS/WMM/Gradation/2015-16

27.04.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Customer : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Mr. N. Shivananda,**
No.35, 2nd Cross, 1st A Main Road, defiance Colony, Bagalagunte, Bangalore.

Name of Work : Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

Date of Testing : 27.04.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **27400**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	850	850	3.1	96.9	95-100
22.4	6200	7050	25.7	74.3	60-80
11.2	5600	12650	46.2	53.8	40-60
4.75	5000	17650	64.4	35.6	25-40
2.36	3500	21150	77.2	22.8	15-30
0.600	2500	23650	86.3	13.7	8-22
0.075	2400	26050	95.1	4.9	0-8

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/Pre slab/2015-16

20.05.2015

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

* Name of Client	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
* Name of work	:	Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
Referece	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast Slab
Sample received on		15.05.2015
Date of Testing	:	20.05.2015
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	77.00	0.386	2553.09	1.54	0.955	32.35	16.48	17.79	16.99	21.24
2	50.00	79.00	0.397	2559.37	1.58	0.960	32.75	16.68	18.01	17.29	21.62
3	50.00	80.00	0.408	2597.41	1.60	0.965	33.50	17.06	18.43	17.78	22.23

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/CUBE/2015-16 25.05.2015

TEST REPORT ON CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivananda,**
No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte,

*** Name of the work** : Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as o : 28^{th} day

Sample Received on : 27.04.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.04.2015	25.05.2015	8.152	352.3	15.66
2	27.04.2015	25.05.2015	8.369	375.4	16.68
3	27.04.2015	25.05.2015	8.200	362.5	16.11

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Chief Executive Officer

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TEST REPORT ON CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivananda,**
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*** Name of the work** : Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as o: 28^{th} day

Sample Received on : 27.04.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.04.2015	25.05.2015	8.422	385.6	17.14
2	27.04.2015	25.05.2015	8.256	360.5	16.02
3	27.04.2015	25.05.2015	8.305	372.5	16.56

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